UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,601	10/09/2001	Andrew Dove	5150-62801	7061

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Jeffrey C. Hood
Conley, Rose, & Tayon, P.C.
P.O. Box 398
Austin, TX 78767

EXAMINER
MCCARTNEY, LINZY T

ART UNIT	PAPER NUMBER
2671	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/974,601	DOVE ET AL.
	Examiner	Art Unit	
	Linzy McCartney	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 October 2002_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-26_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _09 October 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

     a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _3_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1, 2, 4-9, 11, 12 and 17 are rejected under 35 U.S.C. 102(b) as being clearly

anticipated by U.S. Patent No. 5,724,074 to Chainani et al. (Chainani).

a.   Referring to claim 1, Chainani discloses converting the graphical program to an

executable that can be executed by the portable computing device (column 11, lines 21-36);

transferring the executable to the portable computing device (column 11, lines 39-43); and

executing the executable on the portable computing device (column 11, lines 45-50).

b.   Referring to claim 2, Chainani discloses wherein the graphical program is initially

represented as a plurality of data structures that specify the operation of the graphical program

(Fig. 7; column 8, lines 53-56); wherein said converting the graphical program to an executable

that can be executed by the portable computing device comprises converting the graphical

program to executable code that can be executed by the portable computing device (column 11,

lines 21-36).

c.   Referring to claim 4, Chainani discloses creating the graphical program prior to

said converting (Fig. 5).

     d.   Referring to claim 5, Chainani discloses wherein the graphical program comprises

a plurality of interconnected nodes which visually indicate functionality of the graphical program

(Fig. 7).

     e.   Referring to claim 6, Chainani discloses wherein the executable includes

functionality that corresponds to functionality of the graphical program; wherein said executing

the executable includes performing the functionality of the graphical program (column 5, lines

64-67; column 11, lines 21-50; Fig. 7).

     f.   Referring to claim 7, Chainani discloses examining the graphical program to

determine said portions that cannot execute natively on the portable computing device;

incorporating program instructions into the executable in response to said examining (column 11,

lines 21-36); wherein said incorporated program instructions enable said portions to execute on

the portable computing device (column 11, lines 47-50).

     g.   Referring to claim 8, Chainani discloses incorporating program instructions into

the executable to enable display of one or more user interface elements on the portable

computing device (column 12, line 66 – column 13, line 4)

     h.   Referring to claim 9, Chainani discloses incorporating program instructions into

the executable to enable handling said one or more data types of the portable computing device

(column 8, lines 57-59; column 11, lines 21-50).

     i.   Referring to claim 11, Chainani discloses wherein the portable computing device

does not include a graphical program execution engine (column 6, line 58 – column 7, line 13).

     j.   Referring to claim 12, Chainani discloses examining the graphical program to

determine portions that require the functionality of the software execution engine; incorporating

program instructions into the executable in response to said examining (column 11, lines 21-36),

wherein said incorporated program instructions enable said portions to execute on the portable

computing device without use of the software execution engine (column 11, lines 47-50).

      k.   Referring to claim 17, Chainani discloses a processor storing program instructions

a memory medium that stores the graphical program (column 4, line 64 – column 5, line 39); a

portable computing device (Fig. 2); converting the graphical program to an executable that can

be executed by the portable computing device (column 11, lines 21-36); transfer the executable

to the portable computing device (column 11, lines 39-45); wherein the portable computing

device is operable to execute the executable (column 11, lines 45-51).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chainani

as applied to claims 1 and 17 above further in view of U.S. Patent No. 5,638,299 to Miller.

      a.   Referring to claim 3, Chainani does not explicitly disclose wherein the portable

computing device comprises a personal digital assistant. Miller discloses wherein the

wherein the portable computing device comprises a personal digital assistant (Fig. 1,

Abstract). At the time the invention was made, it would have been obvious to one of

ordinary skill in the art to further modify the method of Chainani by using a personal

digital assistant as taught by Miller. The suggestion/motivation for doing so would have

been because it is easy to use and relatively inexpensive and would provide data

acquisition functions (Miller, column 1, lines 57-67).

b.   Referring to claim 18, Chainani does not explicitly disclose wherein the portable

computing device comprises a personal digital assistant. Miller discloses wherein the

wherein the portable computing device comprises a personal digital assistant (Fig.1,

Abstract).

4.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chainani as

applied to claim 1 above further in view of MathWorks, "Real-Time Workshop 4".

a.   Referring to claim 10, Chainani does not explicitly disclose incorporating

program instructions into the executable to enable performance of one or more math

functions on the portable computing device. MathWorks discloses incorporating program

instructions into the executable to enable performance of one or more math functions on

the portable computing device (page 1, paragraph 1; page 3, lower right figure). At the

time the invention was made, it would have been obvious to one of ordinary skill in the

art to modify the method of Chainani by incorporating program instructions to enable

math functions as taught by MathWorks. The suggestion/motivation for doing so would

have been because it would speed up simulations. Provide intellectual property

protection, and run on a wide rage of prototyping targets (MathWorks, page 1, paragraph

1).

5.   Claims 13-16 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Chainani as applied to claim above in view of U.S. Patent No. 5,392,207 to Wilson et al.

(Wilson).

      a.   Referring to claim 13, Chainani does not explicitly disclose wherein said

executing the executable on the portable computing device includes invoking execution

of at least one graphical program on the computer system. Wilson discloses executing the

executable on the computing device includes invoking execution of at least one graphical

program on the computer system (column 3, lines 1-13). At the time the invention was

made, it would have been obvious to a person of ordinary skill in the art to modify the

method of Chainani by invoking at least one graphical program on a computer system as

taught by Wilson. The suggestion/motivation for doing so would have been because it

would provide a programming aid useful for troubleshooting (Wilson, column 2, lines 39-

43).

      b.   Referring to claim 14, Chainani does not explicitly disclose converting the

graphical program to a text-based program and compiling the text-based program to

produce the executable code that can be executed by the portable computing device.

Wilson discloses converting the graphical program to a text-based program (column 8,

lines 12-16) and compiling the text-based program to produce the executable code that

can be executed by the portable computing device (column 8, lines 17-20).

      c.   Referring to claim 15, Chainani does not explicitly disclose displaying the

execution information on a display device of a second computing device in response to

said executing; wherein the second computing device is coupled to the portable

computing device through one of a wired or wireless medium; wherein the execution information is useable in debugging the graphical program. Wilson discloses displaying the execution information on a display device of a second computing device in response to said executing (column 3, lines 1-13); wherein the second computing is coupled to the portable computing device through one of a wired or wireless medium (Fig. 1); wherein the execution information is useable in debugging the graphical program (column 9, lines 45-57).

d.   Referring to claim 16, Chainani does not explicitly disclose receiving user input to the second computing device to debug the execution. Wilson discloses receiving user input to the second computing device to debug the execution (column 10, lines 6-8).

e.   Referring to claim 22, Chainani discloses executing the graphical program on the portable computing device (column 11, lines 45-50) and displaying the block diagram on a display device of a second computing device, wherein the second computing device is coupled to the portable computing device through one a wired or wireless medium (Fig. 7; column 5, lines 50-53). Chainani does not explicitly disclose displaying execution information on the block diagram displayed on the display device in response to said executing the graphical program on the portable computing device, wherein the execution information is useable in debugging the graphical program. Wilson discloses displaying execution information on the block diagram displayed on the display device in response to said executing the graphical program on the portable computing device, wherein the execution information is useable in debugging the graphical program (column 3, lines 1-3; column 9, lines 45-57).

f.   Referring to claim 23, Chainani discloses converting the graphical program to an executable that can be executed by the portable computing device prior to said executing the graphical program on the portable computing device (column 11, lines 21-36); and transferring the executable to the portable computing device (column 11, lines 39-45); wherein said executing the graphical program on the portable computing device comprises executing the executable on the portable computing device (column 11, lines 47-51).

h.   Referring to claim 24, Chainani discloses wherein the second computing device comprises a desktop computer system (Fig. 1).

i.   Referring to claim 25, Chainani does not explicitly disclose receiving user input to the second computing device to debug the graphical program. Wilson discloses receiving user input to the second computing device to debug the graphical program (column 10, lines 6-8).

j.   Referring to claim 26, Chainani does not explicitly disclose wherein said debugging the graphical program comprises performing one or more of: setting break points in the graphical program; performing execution highlighting for the graphical program. Wilson discloses wherein said debugging the graphical program comprises performing one or more of: setting break points in the graphical program; performing execution highlighting for the graphical program (column 9, lines 58-66).

6.   Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over dSPACE, "Solutions for Control" (dSPACE).

a.   Referring to claim 19, dSPACE discloses storing a first graphical program on a

computing device, wherein the first graphical program is configured to invoke execution

on a second graphical program (page 62, paragraph 3; page 63, Figure); storing the

second graphical program on a second computing device; executing the first graphical

program on the portable computing device; and invoking execution of the second

graphical program on the second computing device in response to said executing (page

62, paragraph 3; page 63, Figure). dSPACE does not explicitly disclose a portable

computing device. At the time the invention was made, it would have been obvious to a

person of ordinary skill in the art to modify the method of dSPACE to include a portable

computing device, Official Notice taken. The suggestion/motivation for doing so would

have been because it would reduce the size of the computing system and increase user

mobility.

b.   Referring to claim 20, dSPACE does not explicitly disclose wherein the second

computing device is coupled to the portable computing device through a wireless

medium. At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to modify the method of dSPACE by coupling the devices using a

wireless medium. The suggestion/motivation for doing so would have been because it

would free the user from the constraints imposed by a wired connection.

c.   Claim 21 is rejected with the rationale of the rejection of claim 20.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Linzy McCartney** whose telephone number is **(703) 605-0745**.

The examiner can normally be reached on Mon-Friday (8:00AM-5: 30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor
(Receptionist).
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the
Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

ltm
December 11, 2003

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600